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## TECHNICAL MEMORANDUM

MODIFICATIONS TO THE ACCURACY ASSESSMENT ANALYSIS  
ROUTINE MLTCRP TO PRODUCE AN OUTPUT FILE

By

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ACCURACY ASSESSMENT ANALYSIS ROUTINE MLTCRP  
TO PRODUCE AN OUTPUT FILE (Lockheed  
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16. Abstract  This document describes modifications made to the analysis program MLTCRP in the Accuracy Assessment software system to produce a disk output file. The output files produced by this modified program will be used to aggregate data for regions greater than a single segment.			
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## 1. BACKGROUND

MLTCRP is an analysis program in the Accuracy Assessment Software System which is used to analyze DTERM files and AI dot labels in terms of ground truth information for an individual segment. (For information on this program see "As-Built Design Specification for PDP 11/45 Accuracy Assessment System Using Disk Data File," Job Order 71-695, TIRF 77-0048, LEC-11881.) Some of the information produced by this program is of interest for areas greater than a single segment. In order to facilitate the aggregation of this information, MLTCRP was modified to produce a disk output file containing the necessary information for each segment.

## 2. GENERAL DESCRIPTION

The modifications to MLTCRP which produce the disk output file do not affect the data processing performed by the program. There are some operational restrictions on the program due to the modifications. The program can accept up to three DTERM files for a segment in a run. The order in which the files are processed is not critical for the original program; however, the modified version requires that certain files be in a certain order. For a valid output file to be produced, the following restrictions must be observed:

- a. When type "1" dots are used, there must be two DTERM files for each run: (1) unconditional cluster file (DT2), and (2) machine classification file (DT1). The DTERM files must be entered in this order. If the third file (conditional cluster file-DT3) is used, it must precede the other two files.
- b. When other than type "1" dots are used, only the machine classification file will produce a disk output file. The output file will not contain records 4 and 5.

The output file produced by the program is named MCRPOUT.OUT. It is created in the UIC where the task is located. The output file is an unformatted, sequential access file. The contents of this file are described in appendix A. Records 2, 3, and 6 are two-dimensional arrays. The second subscripts in records 2 and 3 are running indices for the transformations. In record 6, the second subscript is a running index for analyst-labeled dots. In records 4 and 5, if there are no subpixels with a crop code in a class, the crop code is not written to the disk file.

To access the output file, the following statement should be used:

```
OPEN(UNIT=LUN,NAME=FLNM,TYPE='OLD',ACCESS='SEQUENTIAL',  
*    FORM='UNFORMATTED',CARRIAGE CONTROL='NONE',ERR=N)
```

LUN is the logical unit number associated with the file, FLNM is an array containing the file name for the output file with an explicit version number,



and N is a statement number to go to if there is an error in opening the file. The arrays to accept the data should be dimensioned as follows:

```
DIMENSION IREC1(20),IREC2(3,100),IREC3(2,10),IREC4(3000),  
*          IREC5(3000),IREC6(3,105)
```

To load the data into the arrays, the following statements can be used:

```
READ(LUN)(IREC1(I),I=1,20)  
READ(LUN)((IREC2(I,J),I=1,3),J=1,IREC1(13))  
READ(LUN)((IREC3(I,J),I=1,2),J=1,IREC1(14))  
IF(IREC1(9).GT.1)GO TO 10  
READ(LUN)(IREC4(I),I=1,IREC1(16))  
READ(LUN)(IREC5(I),I=1,IREC1(17))  
10 READ(LUN)((IREC6(I,J),I=1,3),J=1,IREC1(10))
```

The conditional jump statement is used because for type "2" dots, records 4 and 5 are not created. In record 1, all of the words except word 2 are integers. Word 2 is an alphanumeric variable (A2). Records 2, 4, 5, and 6 are all integers. In record 3, the first word of each pair is alphanumeric (A1 format).

### 3. DETAILS OF THE MODIFICATIONS

Appendix B is a compiled listing of the routines used in the modified version of MLTCRP. The modifications made to the original program are marked off in blocks on the listings. MLTCRP is overlaid to keep it within the 32K word limit imposed by the PDP 11/45 task builder. The overlay structure is described in figure 1. MPI is the only common block that was changed by the modifications. It was expanded to include the variable DTN, which is the number of the DTERM file. This change in MPI was the only change made in subroutines ZOT, IERR, MTXPT, and PROB. The subroutines AAMCRP, AAMRDD, AAMANL, and PROBPT were modified more extensively. A new subroutine, DISKLD, was developed for the program. The modifications to these subroutines are described below.

#### 3.1 AAMCRP MODIFICATIONS

AAMCRP was modified to open the disk output file before the data are processed, and to close the output file when all of the processing is complete.

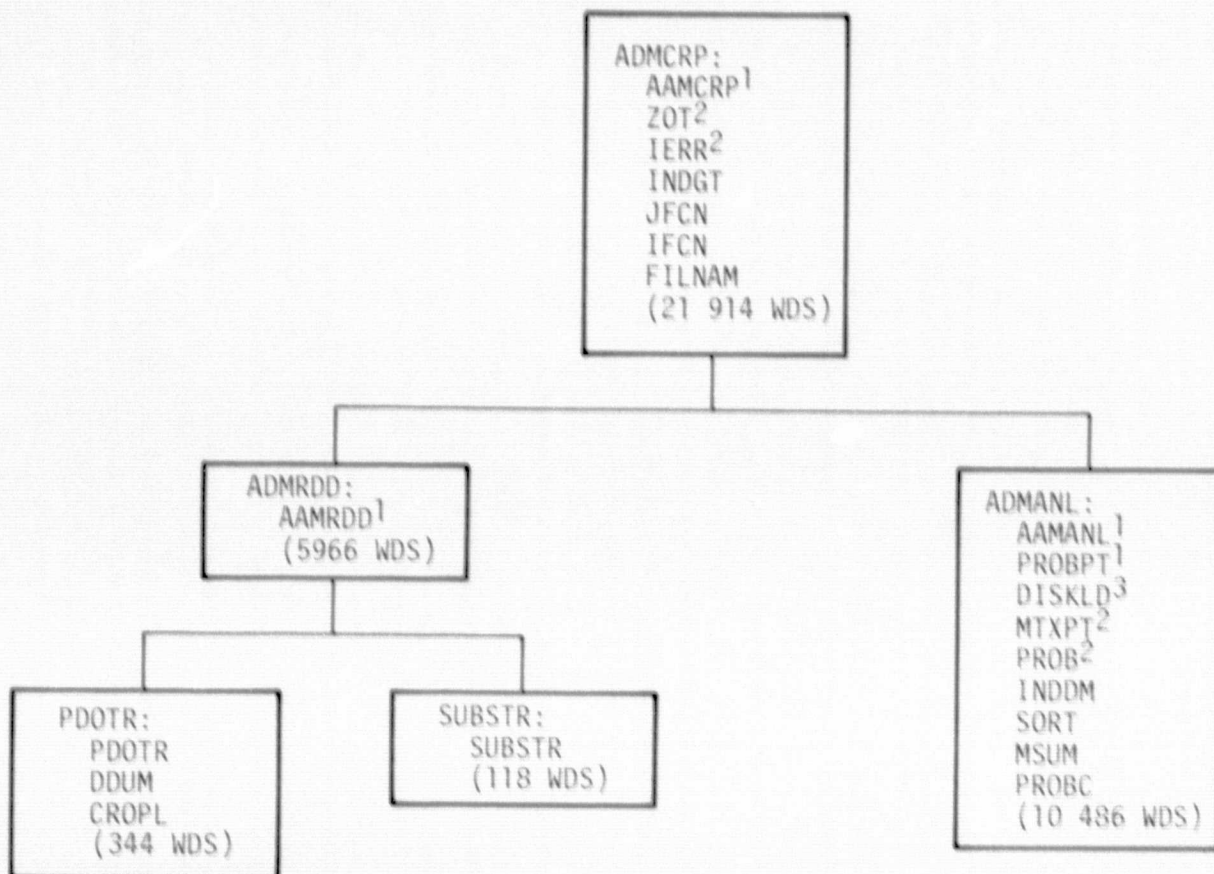
#### 3.2 AAMRDD MODIFICATIONS

Records 1, 2, and 3 are dimensioned in AAMRDD. The DTERM file number, DTN, is determined from the file name. On the first pass through this subroutine, words 1-10, 13, and 14 of record 1, and all of records 2 and 3 are written to the disk output file.

#### 3.3 AAMANL MODIFICATIONS

All six of the output arrays are dimensioned in AAMANL. For the DTERM conditional file (DT3), nothing is done to the output file in AAMANL. For the DTERM unconditional cluster file (DT2), the data in the disk file are read into IREC1, IREC2, and IREC3. IREC4 is loaded during the first call to PROBPT. IREC1, IREC2, IREC3, and IREC4 are then written to the output file. When AAMANL is processing the DTERM machine classification file (DT1), the data from the disk file are read into IREC1, IREC2, IREC3, and IREC4. IREC5 is loaded during the first call to PROBPT. IREC6 is then loaded and all of the





<sup>1</sup> Subroutine was extensively modified

<sup>2</sup> Common statement changed in subroutine

<sup>3</sup> New subroutine

Figure 1.— Overlay structure for modified version of MLTCRP  
(number in parentheses is size for each segment).

records are written to the disk file. At the end of AAMANL, the contents of the disk file are written on the line printer.

### 3.4 PROBPT MODIFICATIONS

The calling arguments for PROBPT were added to pass an array for loading records 4 and 5, and a counter for the length of the record to the subroutine, DISKLD. PROBPT calls DISKLD for DTERM files DT1 and DT2 when PROBPT is processing the number arrays.

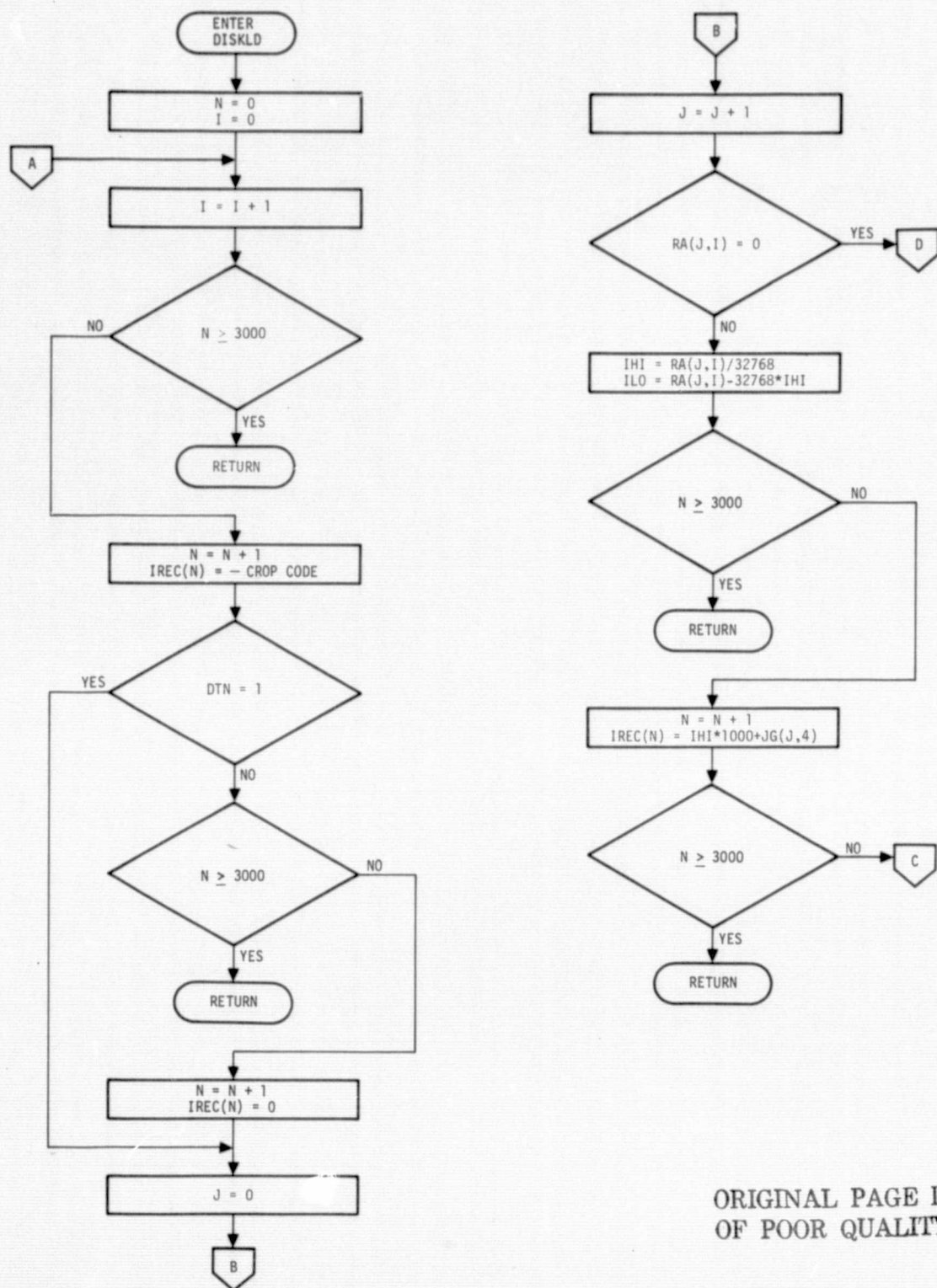
### 3.5 SUBROUTINE DISKLD

DISKLD is a subroutine which takes the data in RA(I,J) and compresses the data by eliminating zeros. The compressed data are loaded into an output array. The calling arguments for DISKLD are:

- a. Outputs: IREC — array into which the compressed data are loaded  
            N — number of words used in array
- b. Input: DTN — DTERM file number

The subroutine requires common blocks MTX and CK.

Figure 2 is a flow chart for this subroutine. The subroutine requires 184 words of storage exclusive of common blocks and the output array.



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Figure 2.— Flow chart for subroutine DISKLD.



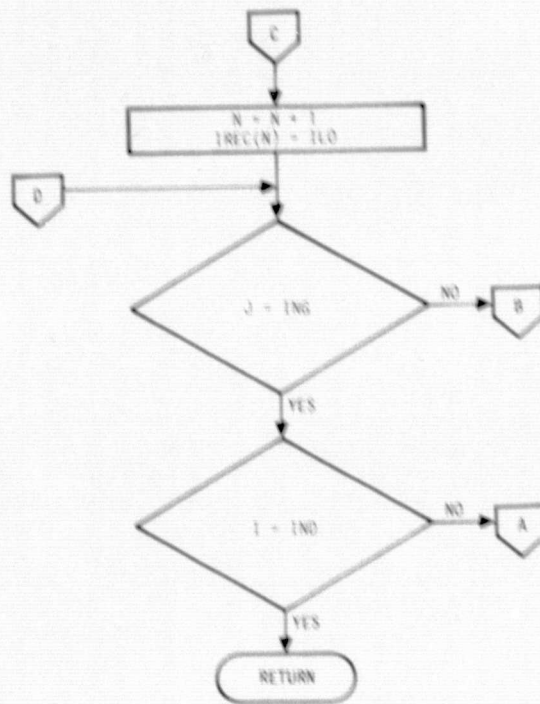


Figure 2.— Concluded.

APPENDIX A

DISK OUTPUT FILE FORMAT FOR MLTCRP



APPENDIX A  
DISK OUTPUT FILE FORMAT FOR MLTCRP

Record 1 — General Information

WD 1 — Segment number  
WD 2 — State  
WD 3 — Processing date  
WD 4 — Acquisition date (1)  
WD 5 — Acquisition date (2)  
WD 6 — Acquisition date (3)  
WD 7 — Acquisition date (4)  
WD 8 — Date for ground truth tape (GTT)  
WD 9 — Dot type  
WD 10 — Number of labeled dots  
WD 11 — Number of cluster codes on DTERM tape  
WD 12 — Number of crop codes on ground truth tape  
WD 13 — Number of crop code transformations  
WD 14 — Number of dot label transformations  
WD 15 — Number of machine codes on ground truth tape  
WD 16 — Number of words in record 4  
WD 17 — Number of words in record 5  
WD 18 — Not used  
WD 19 — Not used  
WD 20 — Not used

## Record 2 — Crop Code Transformations

WD (1,N) — Beginning crop code

WD (2,N) — Ending crop code

WD (3,N) — Transformation

## Record 3 — Dot Label Transformations

WD (1,N) — Alphanumeric label designation

WD (2,N) — Numeric code

## Record 4 — Ground Truth for Unconditional Clusters

WD 1 — First cluster number with sign changed

WD 2 — 1000X (AI label for dot used to label first cluster) + dot number  
[to be added later]

WD 3 — 1000X (integer truncation of number of subpixels in first cluster with  
crop code, divided by 32 768) + crop code

WD 4 — Remainder of subpixels in first cluster with crop code

[Repeat words 3 and 4 for all crop codes in first cluster, then repeat for  
each cluster.]

## Record 5 — Ground Truth for Machine Classes

WD 1 — First machine class number with sign changed

WD 2 — 1000X (integer truncation of number of subpixels in first machine class  
with crop code, divided by 32 768) + crop code

WD 3 — Remainder of subpixels in first machine class with crop code

[Repeat words 2 and 3 for all crop codes in first machine class, then repeat  
for each machine class.]

Record 6 — Ground Truth for Each Labeled Dot

WD (1,N) — 1000X (AI label for dot) + dot number

WD (2,N) — Machine class for dot

WD (3,N) — Crop code for dot on ground truth tape

APPENDIX B

COMPILED LISTING FOR MODIFIED VERSION OF MLTCRP







```
0032      DO B02 PASS=1,NPASS
0033      PASS=PASS
0034      CALL AAMRDN
0035      CALL AAMANL
0036      WRITE(NPRT,334)
0037      334 FORMAT('H1')
0038      B02 CONTINUE
```

```
0039      CALL CLOSE(7)
```

```
0040      CALL DATE(D)
0041      CALL TIME(T)
0042      WRITE(NPRT,333)
0043      333 FORMAT('///')
0044      WRITE(NPRT,110) D,T
0045      WRITE(NPRT,110) D,T
0046      110 FORMAT(' JOB COMPLETED ON ',9A1,' AT ',8A1)
0047      STOP
0048      END
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000670 220	RK,C,CA,LCL
2	SPDATA	000034 14	RK,C,CA,LCL
3	SIDATA	000370 124	RK,C,CA,LCL
4	SVARK	000142 49	RK,C,CA,LCL
6	PD	002346 627	RK,C,ZVR,GBL
7	MPI	000016 7	RK,C,ZVR,GBL
8	CK	010004 2050	RK,C,ZVR,GBL
9	MTX	023470 5000	RK,C,ZVR,GBL
10	PS	000002 1	RK,C,ZVR,GBL

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
BASS	I*2	10-000000	DYN	I*2	7-000014	I	I*2	4-000136	IND	I*2	8-010002	ING	I*2	8-010000
MIND	I*2	7-000000	NAID	I*2	7-000012	NPASS	I*2	4-000134	NPRT	I*2	7-000006	NRDD	I*2	4-000132
NRDR	I*2	4-000130	PASS	I*2	4-000140	RT	R*4	7-000002	TIND	I*2	7-000070			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	I*2	6-000000	000642 209	(11,19)
ATFIL	I*2	4-000070	000016 7	(7)
D	L*1	4-000116	000011 4	(9)
DT	I*2	6-001574	000642 209	(11,19)
DTFIL	I*2	4-000016	000016 7	(7)
DTFL2	I*2	4-000034	000016 7	(7)
DTFL3	I*2	4-000052	000016 7	(7)
G	I*2	6-000642	000642 209	(11,19)
GTFIL	I*2	4-000000	000016 7	(7)
JD	I*2	8-000000	004000 1024	(256,4)
JG	I*2	8-000000	004000 1024	(256,4)
RA	R*4	9-000000	023420 5000	(50,50)
T	L*1	4-000106	000010 4	(8)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
40	**	50	**	58	1-000376	110	3-000124	333	3-000120
334	3-000114	703	3-000000	801	3-000100	802	**		

FUNCTIONS AND SUBROUTINES REFERENCED

AAHANL AAMROD CLASF DATE ZPENS TIME

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ADMCPP,FTN /TPRI0CKS/NR

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PAGE 4

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```

0001      SUBROUTINE ZRT
0002      IMPLICIT INTEGER (A-Z)
0003      COMMON /MPI/MIND ,RT,NPRT,TIND,NAID
0004      COMMON /CK/JG(256,4),JT(256, 4),ING,IND
0005      COMMON /MTX/RA( 80,50)
0006      DO 50 I=1,256
0007      JG(I,1)=I
0008      JD(I,1)=I
0009      50  CONTINUE
0010      ENTRY ZIP
0011      RT=0.0
0012      ING=0
0013      IND=0
0014      DO 850 I=1,256
0015      DO 850 J=2,4
0016      JG(I,J)=0
0017      JD(I,J)=0
0018      850  CONTINUE
0019      DO 851 I=1,50
0020      DO 851 J=1,50
0021      RA(I,J)=0.0
0022      RETURN
0023      END

```

b5

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PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000302 97	RA,I,CDA,LCL
4	SVARS	000004 2	RA,C,CDA,LCL
6	MP1	00001A 7	RA,C,2VR,GBL
7	CK	010004 2050	RA,C,2VR,GBL
8	MTX	023420 5000	RA,C,2VR,GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
ZIP		1-000064	ZPT		1-000000									

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	6-000014	I	I*2	4-000000	IND	I*2	7-010002	ING	I*2	7-010000	J	I*2	4-000002
MIND	I*2	6-000000	NXID	I*2	6-000012	NPRT	I*2	6-000005	RT	R*4	6-000002	TINX	I*2	6-000010

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	7-004000	004000 7024	(256,4)
JG	I*2	7-000000	004000 7024	(256,4)
RA	R*4	8-000000	023420 5000	(50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
50	**	850	**	851	**				

TOTAL SPACE ALLOCATED = 033750 7156



```
0001 SUBROUTINE INDGT(TAPE)  
0002 IMPLICIT INTEGER(A-Z)  
0003 COMMON /CK/JG(256,4),JD(256,4),IAG,IND  
0004 KK=JG(TAPE,1)  
0005 IF(JG(KK,2).NE.0) RETURN  
0006 IND=IND+1  
0007 JG(KK,2) = KK  
0008 JG(KK,3) =IND  
0009 RETURN  
0010 END
```

B-7

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PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	ICORDE1	000076 31	R,I,CBA,LCL
4	SVARE	000072 1	R,I,CBA,LCL
6	CK	010004 2050	R,I,ZVE,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
INDGT		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IND	I*2	6-010002	ING	I*2	6-010000	KK	I*2	4-000000	TYPE	I*2	F-000002			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000 1024	(256,4)
JS	I*2	6-000000	004000 1024	(256,4)

TOTAL SPACE ALLOCATED = 010104 2082

NO FPP INSTRUCTIONS GENERATED

```
0001      SUBROUTINE INDDT(TAPE)  
0002          IMPLICIT INTEGER(A-Z)  
0003      COMMON /CK/JG(256,4),JD(256, 4),ING,IND  
0004          KK=JD(TAPE,1)  
0005          IF(JD(KK,2).NE.0) RETURN  
0006          IND=IND+1  
0007          JD(KK,2) = KK  
0008          JD(KK,3) = IND  
0009          RETURN  
0010      END
```



PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCNDR1	000076 31	RW, I, CCA, LCL
4	SVARE	000072 1	RW, D, CCA, LCL
6	CK	010004 2050	RW, D, 2VR, GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
INDNT		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IND	1*2	6-010002	ING	1*2	6-010004	KK	1*2	4-000000	TAP	1*2	6-000002			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	1*2	6-004000	004000 1024	(256,4)
JG	1*2	6-000000	004000 1024	(256,4)

TOTAL SPACE ALLOCATED = 010104 2082

NO FPP INSTRUCTIONS GENERATED



```
0001 FUNCTION JFCN(X)  
0002 IMPLICIT INTEGER (I=0),(S=Z)  
0003 COMMON /CK/J0(256,4),JD(256,4),INC,IND  
0004 KD=JD(X,1)  
0005 LD=JD(KD,2)  
0006 JFCN=JD(LD,3)  
0007 RETURN  
0008 END
```

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ADHCRP,FTN /TRIRL2CKS/WP

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PAGE 12

# PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCDF1	000066 27	RH,1,CBN,LCL
3	SIPATA	000002 1	RH,C,CBN,LCL
4	EVARS	000004 2	RH,C,CBN,LCL
6	CK	010004 2050	RH,C,ZVR,CBL

## ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
JFCN	1*2	1-000000									

## VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IND	1*2	6-010000	ING	1*2	6-010000	KD	1*2	4-000000	LD	1*2	4-000002
									X	1*2	6-000002

## ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	1*2	6-004000	004000	1024 (256,4)
JB	1*2	6-000000	004000	1024 (256,4)

TOTAL SPACE ALLOCATED = 010100 2080

NO FPP INSTRUCTIONS GENERATED

B-12

```
0001 FUNCTION IFCN(TV)
0002 IMPLICIT INTEGER (A-G),(S-Z)
0003 COMMON /CK/JG(256,4),JF(256,4),ING,IND
0004 KG=JG(TV,1)
0005 LG=JG(KG,2)
0006 IFCN=JG(LG,3)
0007 RETURN
0008 END
```

B-13

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PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000066 27	RW,I,C0N,LCL
3	SINATA	000002 1	RW,C,C0N,LCL
4	SVARS	000004 2	RW,C,C0N,LCL
6	CK	010004 2050	RW,C,ZVR,GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IFCN	I*2	1*000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IND	I*2	6*010002	ING	I*2	6*010000	KG	I*2	4*000000	LG	I*2	4*000002	TV	I*2	6*000002

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6*004000	004000 1024	(256,4)
JG	I*2	6*000000	004000 1024	(256,4)

TOTAL SPACE ALLOCATED = 010100 2050

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```

0001      SUBROUTINE IERR(I1,JJ)
          COMMON /MPI/MIND ,RT,NPRT,TINC,NAID
          *
          *
0002      COMMON /MPI/MIND ,RT,NPRT,TINC,NAID,BTN
          *
          *
0003      IF(I1.LT.1)      WRITE(NPRT,825)  I1
0004      IF                (I1.GT.256)     WRITE(NPRT,825)  I1
0005      IF(JJ.LT.1)      WRITE(NPRT,826)  JJ
0006      IF(JJ.GT.256)     WRITE(NPRT,826)  JJ
0007      IF(I1.LT.1.2R,I1.GT.256) STOP
0008      IF(JJ.LT.1.2R,JJ.GT.256) STOP
0009      825 FORMAT(1H0,10X,'I1=',15)
0010      826 FORMAT(1H0,10X,'JJ=',15)
0011      RETURN
0012      END
  
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SC2DR1	000300	96
3	SIMATA	000030	12
6	MPI	000022	9

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IERR		1*000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	R*4	6*000016	II	I*2	6*000002*	JJ	I*2	6*000004*	MINI	I*2	6*000000	NAIN	I*2	6*000014
NPRT	I*2	6*000006	RT	R*4	6*000002	TIND	R*4	6*000010						

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
825*	3*000000	826*	3*000014						

TOTAL SPACE ALLOCATED \* 000352 167

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ADMCRP,2PJ,LP14C170,13ADMCRP.FTN

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[illegible]

100 90 80 70 60 50 40 30 20 10 0

```

00000000 COMMON /PS/INNO,RT,NPPT,TEND,ACD
00000001 COMMON /PROTECT,IS1,IS2,IS3,CT121,IS1
00000002 COMMON /PS/PASS
00000003 COMMON /DD/CDTR(3,36)
00000004 BYTE RUP1(3060),RUP2(3061)
00000005 BYTE AS
00000006 BYTE CHAR(50)

```

0016	BYTE CHAR1(6)
0017	EQUIVALENCE (CHAR1(1),C7F11(2))

```
0018 EQUIVALENCE (S1,RUF1(67)),(S2,RUF2(67))
0019 COMMON /STATUS/MS,M2
0020 COMMON /CK/J0(256,4),J0(256,4),INC,IND
0021 COMMON /HTX/RA( 50,50)
0022 DATA FILDT/'DB','21','C1','C1','XX','IX','XX','XX','XX','XX',
      * 'XX','XX',0/
0023 DATA FILDT/'DB','21','C1','C1','XX','IX','XX','XX','XX','XX',
      * 'XX','XX',0/
0024 NRDP = 4
0025 NRDP=5
0026 GOTO(UNITNRDP,NAME,FILTPP,DATF,TYPE,FPLT,
      * ACCESS,REQUENTAIL,FERRH,FERRATED,CARRAGE,CONTROL,NRNE)
C *** READ CONTROL CARD WITH FILE NAMES ***
C ** GRUND TRUTH AND DTF FILES **
0027 READ(NRDP,704) ATFIL,DTFIL,CTFIL,DTFL2,DTFL3
0028 704 FORMAT (5I6A2,'.',1X)
```

```

0029          LEAD GRANT TRUTH DATE INT3 (REC1
0030          DEC25(14),752,CHAR1(2)) (REC1(6)
0031          752 P23WAT(14)

```

CALL FILNAM(GTFF1),FILG9)



```

0032 CALL SUBSTR(FILGT,1,26,FILA1,1,26)
0033 CALL FILNAM(AIP11,FILA1)
0034 WRITE (NPRT,704) (FILA1(1),I=1,12)
0035 706 F2RMT (1H0,10X'A1 DOTS FILE NAME = ',12(A2))
0036 WRITE(NPRT,710)(FILGT(1),I=1,12)
0037 710 F2RMT (///,10X,'AT FILE NAME = ',12(A2))
0038 IF(PASS.EQ,1)G2 T2 72
0039 IF(PASS.NE,2)G2 T4 74
C
C **** PICK UP SEC2ND FILE NAME ****
C
0040 CALL FILNAM(DTFL2,FILDT)
0041 G2 T2 99
0042 78 CONTINUE
C
C **** PICK UP 3RD FILE NAME ****
C
0043 CALL FILNAM(DTF13,FILDT)
C
C *
C
C JUMP OVER NEXT CALL FILNAM
0044 G2 T2 99
C
C *
C
0045 79 CONTINUE
0046 CALL FILNAM(DTF11,FILDT)
0047 99 CONTINUE
C
C *
C
C DETERMINE DTERM FILE NUMBER FROM NAME
0048 IF(FILDT(12).EQ,'T1') DTN=1
0049 IF(FILDT(12).EQ,'T2') DTN=2
0050 IF(FILDT(12).EQ,'T3') DTN=3
C
C *
C
0051 WRITE (NPRT,711)(FILDT(1), I=1,12)
0052 711 F2RMT (///,10X,'* AT FILE NAME = ',12(A2))
C
C **** OPEN FILES ****
0053 OPEN (UNIT=NRDR,NAME=FILA1,TYPE='2LD',F2RMT='F2RMTTED')
0054 OPEN(UNIT=1,NAME=FILDT,TYPE='2LD',ACCESS='SEQUENTIAL',
C
C CARRIAGE CONTR2L='NONE',F2RMT='UNF2RMTTED')
0055 OPEN(UNIT=2,NAME=FILDT,TYPE='2LD',ACCESS='SEQUENTIAL',
C
C CARRIAGE CONTR2L='NONE',F2RMT='UNF2RMTTED')
C
0056 D2 1 I=1,26
0057 AT(1)=1
0058 1 CONTINUE
0059 WRITE(NPRT,702)
0060 702 F2RMT(///,10X,'TYPE TO CODE TRANSFORMATION')
0061 WRITE(NPRT,300)
0062 300 F2RMT(///,3X,'TYPE',6X,'CODE')
C
C *****

```

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0063

NCCT=0

NCCT = NUMBER OF DPT LABEL TRANSFORMATIONS

0064

5 CONTINUE  
READ(NROD,101,ERR=027) AS,AN

0065

101 FORMAT(1A1,4X,115)

0066

WRITE(NPRT,102) AS,AN

0067

102 FORMAT(1X,3X,A1,140)

0068

0069

NCCT=NCCT+1

0070

IREC3(1,NCCT)=AS

0071

IREC3(2,NCCT)=AN

0072

IF(AS.EQ.88) GO TO 6

0073

AT(AS-64)=AN

0074

GO TO 5

0075

6 CONTINUE

0076

IREC1(14)=NCCT

0077

DO 7 I=1,11

0078

DO 8 J=1,19

0079

A(I,J)=0

0080

G(I,J)=0

0081

DT(I,J)=0

0082

8 CONTINUE

0083

7 CONTINUE

0084

WRITE(NPRT,701)

0085

701 FORMAT(1H1,10X,'A1 DPT LABELS')

0086

WRITE(NPRT,301)

0087

Z=0

Z = FLAG FOR PICKING UP DATA FROM FIRST CARD

0088

301 FORMAT(1X,7X,'LINE',6X,'PIXEL',7X,'TYPE')

0089

NAID=0

0090

9 CONTINUE

0091

READ(NPRT,103,ERR=029) AL,AP,AS,(CHAR(I),I=1,50)

0092

103 FORMAT(10X,112,1X,112,1X,1A1,13A,50A1)

0093

WRITE(NPRT,104) AL,AP,AS,(CHAR(I),I=1,50)

61-8

ADMDD,FTN /TR:RL2CKS/WP

0094 104 FORMAT(1H ,2110,9X,141,13X,50A1)

```

0095      IF(Z,NE.0,2R,PASS,NE.1) GO TO 715
0096      DEC0DE(4,712,CHAR(5)) IREC1(3)
0097      DEC0DE(4,712,CHAR(10)) IREC1(4)
0098      DEC0DE(4,712,CHAR(15)) IREC1(5)
0099      DEC0DE(4,712,CHAR(20)) IREC1(6)
0100      DEC0DE(4,712,CHAR(25)) IREC1(7)
0101      DEC0DE(4,712,CHAR(30)) IREC1(8)
0102      DEC0DE(4,712,CHAR(44)) IREC1(9)

```

```

0103      714 FORMAT(11)
0104      A1=CHAR(2)
0105      B=CHAR(3)
0106      IREC1(2)=A1+ISHT(R,R)
0107      Z=1

```

0108 715 CONTINUE

```

0109      IF(AL.EQ.0) GO TO 70
0110      NAID=NAID+1
0111      ANMAT(AS*64)
0112      IF(A(AL,AP),NE.0) WRITE(NPRT,313) AL,AP
0113      313 FORMAT(///,10X,'DUPLICATE D2T LABEL FOR D2T = ',215,///)
0114      A(AL,AP)=AN
0115      GO TO 9
0116      1 CONTINUE
0117      WRITE(NPRT,502) NAID
0118      502 FORMAT(//,10X,'NO. OF AT D2TS=',15)

```

0119 IREC1(10)=NAID

```

0120      D0 50 1=1,256
0121      JG(1,1)=0
0122      JD(1,1)=0
0123      50 CONTINUE
0124      CALL ZIP
0125      WRITE(NPRT,915)
0126      915 FORMAT(1H0,10X,'GROUND TRUTH')
0127      WRITE (NPRT,905)
0128      905 FORMAT(//,10X,'CODE TO CODE TRANSFORMATION',//,8X,'BEGIN',7X,
    1'END',7X,'CODE')

```

```

0129      NCCT = NUMBER OF CRCP CODE TRANSFORMATIONS
      NCCT=0

```

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0130 121 CONTINUE  
0131 READ(NRDD,118) NR,NE,NZ  
0132 118 FORMAT(3I5)  
0133 WRITE(NPRT,117) NR,NE,NZ  
0134 117 FORMAT(1H,3I10)

0135 NCCT=NCCT+1  
0136 IREC2(1,NCCT)=NB  
0137 IREC2(2,NCCT)=NE  
0138 IREC2(3,NCCT)=NZ

0139 IF((NB.EQ.0).AND.(NE.EQ.0).AND.(NZ.EQ.0)) GO TO 129  
0140 IF((NB.EQ.0).AND.(NE.EQ.0).AND.(NZ.EQ.-1)) GO TO 224  
0141 D0 119 N=NR,NE  
0142 JG(N,1)=NZ  
0143 119 CONTINUE  
0144 GO TO 121  
0145 224 CONTINUE

0146 IF(PASS.GT.1) GO TO 716  
0147 PRINT(NPRT,717)PASS  
0148 717 FORMAT(1H1,'THIS SHOULD ONLY SHOW UP ON THE FIRST PASS',I2)  
0149 IREC1(13)=NCCT  
0150 WRITE(7)((IREC1(I,I=1,20)  
0151 JMAX=IREC1(13)  
0152 WRITE(7)((IREC2(I,J),I=1,3),J=1,JMAX)  
0153 JMAX=IREC1(14)  
0154 WRITE(7)((IREC3(I,J),I=1,2),J=1,JMAX)  
0155 REWIND(7)  
0156 716 CONTINUE

0155 D0 225 I=1,256  
0156 225 JG(I,1)=1  
0157 122 CONTINUE  
0158 WRITE(NPRT,916)  
0159 916 FORMAT(1H0,10X,'ENTER NAME')  
0160 WRITE(NPRT,905)  
0161 321 CONTINUE  
0162 READ(NRDD,118) NR,NE,NZ  
0163 WRITE(NPRT,117) NR,NE,NZ  
0164 IF((NB.EQ.0).AND.(NE.EQ.0).AND.(NZ.EQ.0)) GO TO 322  
0165 IF((NB.EQ.0).AND.(NE.EQ.0).AND.(NZ.EQ.-1)) GO TO 424  
0166 D0 319 N=NR,NE  
0167 JD(N,1)=NZ  
0168 319 CONTINUE  
0169 GO TO 321  
0170 424 CONTINUE  
0171 D0 325 I=1,256

```

0172      JD(1,1)=1
0173      325 CONTINUE
0174      322 CONTINUE
0175      READ(1) BUF1
0176      READ(2) BUF2
0177      WRITE(NPRT,302) S1:(BUF1(1B),1B=61,63),S2:(BUF2(1B),1B=61,63)
0178      302 FORMAT(///,10X,'GT SEG, N2,=',15,5X,'DAY=',15,5X,'MON=',15,5X,
1'YEAR=',15,///,10X,'DTRM SEG,N2,=',15,5X,'DAY=',15,5X,'MON=',15,
25X,'YEAR=',15)
0179      WRITE(NPRT,337)
0180      337 FORMAT(///,10X,'THE CONFIGURATIONS OF THE 209 DOTS',///)
0181      D0 11 L=1,117
0182      L10=MOD(L,10)
0183      READ(2) (BUF2(I),I=1,360)
0184      D0 12 LL=1,3
0185      READ(1) (BUF1(I),I=1,540)
0186      P=72
0187      SS=0
0188      D0 13 S=1,196
0189      S10=MOD(S,10)
0190      X=BUF2(S+72)
0191      IF(X,LE,0) X=X+256
0192      CALL INDDT(X)
0193      D0 14 SS=1,2
0194      NDOT=0
0195      IF((L10.EQ,0).AND.(S10.EQ,0).AND.(LL.EQ,3).AND.(SS.EQ,2)) NDOT=1
0196      P=P+1
0197      TV=BUF1(P)
0198      TV=TV+128
0199      IF(L10.EQ,0.AND.S10.EQ,0) SS=SS+1
0200      IF(L10.EQ,0.AND.S10.EQ,0) D0TR(LL,SS)=JD(TV,1)
0201      IF(TV.EQ,0) G0 T0 14
0202      CALL INDDT(TV)
0203      RT=RT+1.0
0204      II=IFCN(TV)
0205      JJ=JFCN(X)
0206      CALL IERR(II,JJ)
0207      RA(II,JJ)=RA(II,JJ)+1.0
0208      IF(NDOT.NE,1) G0 T0 15
0209      DT(L/10,S/10)=JD(X,1)
0210      15 CONTINUE
0211      14 CONTINUE
0212      13 CONTINUE
0213      IF(L10.EQ,0) CALL DDUM(L)
0214      12 CONTINUE
0215      IF(L10.EQ,0) CALL PD0TR
0216      11 CONTINUE
0217      G0 T0 19
0218      927 WRITE (NPRT,928)
0219      928 FORMAT (1H , 20X, 'AS AN NOT READ')
0220      G0 T0 19
0221      929 WRITE (NPRT,930)
0222      930 FORMAT (1H , 20X, 'AL,AP,AS NOT READ')
0223      19 CONTINUE
0224      CALL CL0SE (1)
0225      CALL CL0SE (2)

```

B-22

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F2RTRAN IV-PLUS V02-55  
ADMROD.FTN /TRIMLOCKS/WP

58113111

24\*APR\*79

PAGE 7

0226 CALL CL2SE (NRDR)  
0227 10 CONTINUE  
0228 CALL CL2SE (NRDD)  
0229 RETURN  
0230 END



PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	005412 1413	RH,C,CON,LCL
2	SPDATA	000034 14	RH,C,CON,LCL
3	SIDATA	001552 437	RH,C,CON,LCL
4	SVARS	016510 3748	RH,C,CON,LCL
6	MPI	000016 7	RH,C,ZVR,GRL
7	RD	002346 627	RH,C,ZVR,GRL
8	PS	000002 1	RH,C,ZVR,GRL
9	DD	000344 114	RH,C,ZVR,GRL
10	STATUS	000004 2	RH,C,ZVR,GRL
11	CK	010004 2050	RH,C,ZVR,GRL
12	MTX	023420 5000	RH,C,ZVR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
ADMRRDD		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
AL	I*2	4-016432	AN	I*2	4-016424	AP	I*2	4-016434	AS	L*1	4-016330	A1	I*2	4-016436
B	I*2	4-016440	DTN	I*2	6-000014	I	I*2	4-016420	IB	I*2	4-016434	II	I*2	4-016504
IND	I*2	11-010002	ING	I*2	11-010000	J	I*2	4-016426	JJ	I*2	4-016506	JMAX	I*2	4-016452
L	I*2	4-016456	LL	I*2	4-016462	L10	I*2	4-016460	MIND	I*2	6-000000	N	I*2	4-016450
NAID	I*2	6-000012	NR	I*2	4-016442	NCCT	I*2	4-016422	NDOT	I*2	4-016500	NE	I*2	4-016444
NO	I*2	4-016446	NPRT	I*2	6-000006	NRDD	I*2	4-016416	NRDR	I*2	4-016414	OS	I*2	4-016466
P	I*2	4-016464	PASS	I*2	6-000000	RT	R*4	6-000002	S	I*2	4-016470	SS	I*2	4-016476
S1	I*2	4-006066	S10	I*2	4-016472	S2	I*2	4-000102	TINH	I*2	6-000010	TV	I*2	4-016502
W1	I*2	10-000000	W2	I*2	10-000002	X	I*2	4-016474	Z	I*2	4-016430			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	I*2	7-000000	000642 209	(11,19)
ATFIL	I*2	4-015010	000016 7	(7)
AT	I*2	4-013766	000064 26	(26)
BUF1	L*1	4-005764	005764 1530	(3060)
BUF2	L*1	4-000000	005764 1530	(3060)
CHAR	L*1	4-016331	000062 25	(50)
CHAR1	L*1	4-013754	000006 3	(6)
DATR	I*2	9-000000	000344 114	(3,38)
DT	I*2	7-001504	000642 209	(11,19)
DTFIL	I*2	4-014652	000016 7	(7)
DTFL2	I*2	4-014754	000016 7	(7)
DTFL3	I*2	4-014772	000016 7	(7)
FILAI	I*2	4-015026	000032 13	(13)

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FILDT	I*2	4-014722	000032	13	(13)
FILGT	I*2	4-014670	000032	13	(13)
G	I*2	7-000642	000642	209	(11,19)
GTFIL	I*2	4-013750	000016	7	(7)
IPEC1	I*2	4-015060	000050	20	(20)
IPEC2	I*2	4-015130	001130	300	(3,100)
IPEC3	I*2	4-016260	000050	20	(2,10)
JD	I*2	11-004000	004000	1024	(256,4)
JO	I*2	11-000000	004000	1024	(256,4)
RA	R*4	12-000000	023420	5000	(50,50)
SITE	I*2	4-014052	000600	192	(64,3)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
1	**	5	1-000754	6	1-001156	7	**	8	**
9	1-001344	10	1-002342	11	**	12	**	13	**
14	1-005120	15	1-005112	18	**	19	1-005340	50	**
78	1-000420	79	1-000440	99	1-000456	101	3-000240	102	3-000250
103	3-000344	104	3-000364	117	3-000640	118	3-000634	119	**
121	1-002524	122	1-003416	224	1-003024	225	**	300	3-000220
301	3-000310	302	3-000666	313	3-000410	319	**	321	1-003464
322	1-003766	325	**	337	3-001036	424	1-003720	502	3-000464
701	3-000264	702	3-000156	704	3-000000	706	3-000020	710	3-000060
711	3-000116	712	3-000014	714	3-000404	715	1-002200	716	1-003350
905	3-000540	915	3-000514	916	3-000644	927	1-005264	928	3-001114
929	1-005314	930	3-001144						

FUNCTIONS AND SUBROUTINES REFERENCED

CLOSE	DDUM	FILNAM	IERR	IFCN	INDCT	INDGT	JFCN	OPENS	PDBTR	SUBSTR	ZIP	SISWFT
-------	------	--------	------	------	-------	-------	------	-------	-------	--------	-----	--------

TOTAL SPACE ALLOCATED = 064312 13413

ADMRRD,OBJ,LP1=[170,1]ADMRRD,FTN

```

0001      SUBROUTINE AAPANI
0002      IMPLICIT INTEGER (A-Z)
0003      COMMON /SD/A(11,19),G(11,19),DT(11,19)
0004      COMMON /MTX/RA( 50,50)
0005      COMMON /CK/JG(256,4),JD(256, 4),ING,IND
0006      COMMON /MPI/MIND ,RT,NPRT,TIND,NAID
0007
0006      COMMON /MPI/MIND,RT,NPRT,TIND,NAID,DTN
0007      DIMENSION IREC1(20),IREC2(3,100),IREC3(2,10),IREC4(3000),
0008               IREC5(3000),IREC6(3,105)
0009
0006      WRITE(NPRT,776) ING
0009      WRITE(NPRT,775) IND
0010      775 FORMAT(1H0,10X,'IND= ',15)
0011      77A FORMAT(1H0,10X,'ING= ',15)
0012
0012      IF(DTN.EQ.3) GO TO 781
0013      FOR CONDITIONAL CLUSTER FILE (DTN=3) SKIP PROCESSING
0014      READ(7) ((IREC1(I),I=1,20)
0015      JMAX=IREC1(13)
0016      READ(7) ((IREC2(I,J),I=1,3),J=1,JMAX)
0017      JMAX=IREC1(14)
0018      READ(7) ((IREC3(I,I),I=1,2),J=1,JMAX)
0019      IREC1(12)=ING
0020      IF(DTN.EQ.1) GO TO 780
0021      FOR UNCONDITIONAL CLUSTER FILE (DTN=2) ENTER NUMBER OF
0022      CRAP CODES ON GTT AND NUMBER OF CLUSTERS ON DTERM TAPE
0023      IREC1(11)=IND
0024      GO TO 781
0025      FOR CLASS FILE (DTN=1) ENTER NUMBER OF CLASSES AND READ
0026      GT FILE FOR UNCONDITIONAL CLUSTERS
0027      780 IREC1(15)=IND
0028      IF(IREC1(9),NE.1) GO TO 781
0029      IMAX=IREC1(14)
0030      READ(7) ((IREC4(I),I=1,IMAX)
0031      781 REWIND(7)
0032
0032      IF(ING.LE.50,AND,IND.LE.50) GO TO 224
0033      PRINT(NPRT,225)
0034      225 FORMAT(1H0,'STOPPING DUE TO MORE THAN 50 CRAP CODES!//')
0035      STOP
0036      224 RCHECK=117.0*196.0*6.0
0037      WRITE(NPRT,230)
0038      230 FORMAT (1H0,10X,'THE WHOLE SCENE')
0039      IF(RT.NE.RCHECK) WRITE(NPRT,223)
0040      223 FORMAT(//,10X,'THE WHOLE SEGMENT WAS NOT GROUND TRUTHED')
0041      WRITE(NPRT,222) RT
0042      222 FORMAT(//,10X,'COMPUTATIONS BASED ON ',F10.2,' SUBPIXELS',/)

```

B-26

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```

0038      TIND=1
          CALL PRBBPT
          *
0039      IF(DTN,EQ,2) CALL PRBBPT(IREC4,IREC1(16))
0040      IF(DTN,EQ,3) CALL PRBBPT(IREC4,ACCT)
0041      IF(DTN,EQ,1) CALL PRBBPT(IREC5,IREC1(17))
          *
0042      WRITE (NPRT,880)
0043      880  FORMAT (1H1, 10X, 'THE 209 DOTS')
0044      DO 881 I=1,11
0045      WRITE(NPRT,882) (G(I,J), J=1,19)
0046      882  FORMAT (1H0,10X,'GT', 19I5)
0047      WRITE (NPRT,883) (DT(I,J), J=1,19)
0048      883  FORMAT(1H , 10X,'DT',19I5)
0049      WRITE (NPRT,884) (A(I,J),J=1,19)
0050      884  FORMAT (1H , 10X,'AI',19I5)
          *
          * FOR CLASS FILE(DTN=1) LOAD DDT LABELING DATA INTO IREC2
0051      IF(DTN,NE,1) GO TO 881
0052      DO 885 J=1,19
0053      IF(A(I,J),EQ,0) GO TO 885
0054      NCCT=NCCT+1
0055      IREC6(1,NCCT)=A(I,J)*1000+(I-1)*19+J
0056      IREC6(2,NCCT)=DT(I,J)
0057      IREC6(3,NCCT)=G(I,J)
0058      885  CONTINUE
          *
0059      881  CONTINUE
          *
          * WRITE DATA INTO DISK
0060      IF(DTN,EQ,3) GO TO 886
0061      WRITE(7) ((IREC1(I),I=1,20)
0062      WRITE(7) ((IREC2(I,J),I=1,3),J=1,IREC1(13))
0063      WRITE(7) ((IREC3(I,J),I=1,2),J=1,IREC1(14))
0064      IF(IREC1(9),NE,1) GO TO 887
0065      WRITE(7) (IREC4(I),I=1,IREC1(16))
0066      IF(DTN,EQ,2) GO TO 886
0067      WRITE(7) (IREC5(I),I=1,IREC1(17))
0068      887  WRITE(7) ((IREC6(I,J),I=1,3),J=1,IREC1(10))
0069      888  REWIND(7)
          *
0070      CALL ZBT
0071      DO 820 I=1,11
0072      DO 820 J=1,19

```

B-27

```
0073      X = DT(I,J)
0074      TV = G(I,J)
0075      CALL INDT(TV)
0076      CALL INDT(X)
0077      II=IFCN(TV)
0078      JJ=JFCN(X)
0079      CALL TERR(II,JJ)
0080      RACTI,JJ) = RACTI,JJ)+1.0
0081      920  CONTINUE
0082      RT=209.1
```

C CALL PRORPT

```
0083      CALL PRORPT(IREC4,'CCT')
      *
```

```
0084      CALL ZBT
0085      DO 920 I=1,11
0086      DO 920 J=1,19
0087      IF(ACT,I),EQ,0) GO TO 920
0088      X = DT(I,J)
```

```
0089      TV = G(I,J)
0090      CALL INDT(TV)
0091      CALL INDT(X)
0092      II=IFCN(TV)
0093      JJ=JFCN(X)
0094      CALL TERR(II,JJ)
0095      RACTI,JJ) = RACTI,JJ)+2.0
```

```
0096      920  CONTINUE
0097      RT=NAID
0098      WRITE(NPRT,921)
0099      921  FORMAT(1H0,1X,1TH A1 D7TS')
      CALL PRORPT
```

```
0100      CALL PRORPT(IREC4,'CCT')
      *
```

```
0101      TIND=2
0102      CALL ZBT
0103      DO 950 I=1,11
0104      DO 950 J=1,19
0105      IF(ACT,I),EQ,0) GO TO 950
```

```
0106      X=DT(I,J)
0107      TV=G(I,J)
0108      CALL INDT(TV)
0109      CALL INDT(X)
0110      II=IFCN(TV)
0111      JJ=JFCN(X)
0112      RACTI,JJ)=RACTI,JJ)+1.0
```

```
0113      950  CONTINUE
0114      RT=NAID
```

B-28

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```

C      CALL PR2BPT
C      *
C
0115  CALL PR2BPT(IREC4,NCCT)
C      *
C
0116  TIND=3
0117  CALL 20T
0118  D3 960 I=1,11
0119  D3 960 J=1,19
0120  IF(A(I,J),EQ,0) G0 T2 960
0121  X=A(I,J)
0122  TV=G(I,J)
0123  CALL INDGT(TV)
0124  CALL INDDT(X)
0125  II=IFCN(TV)
0126  JJ=JFCN(X)
0127  RA(II,JJ)=RA(II,JJ)+1,0
0128  960  CONTINUE
0129  RT=NAID

```

CALL PR2BPT

```

C      *
C
0130  CALL PR2BPT(IREC4,NCCT)
0131  IF(DTN,NE,1) G0 T0 7
0132  READ(7) ((IREC1(I),I=1,20)
0133  READ(7) ((IREC2(I,J),I=1,3),J=1,IREC1(13))
0134  READ(7) ((IREC3(I,J),I=1,2),J=1,IREC1(14))
0135  IF(IREC1(9),NE,1) G0 T0 8
0136  READ(7) ((IREC4(I),I=1,IREC1(16))
0137  READ(7) ((IREC5(I),I=1,IREC1(17))
0138  8 READ(7) ((IREC6(I,J),I=1,3),J=1,IREC1(10))
0139  REWIND(7)
0140  PRINT(NPRT,1) ((IREC1(I),I=1,20)
0141  1 FORMAT(1H1,I4,1X,A2,18I6)
0142  PRINT(NPRT,2)
0143  2 FORMAT(1H0)
0144  PRINT(NPRT,3) ((IREC2(I,J),I=1,3),J=1,IREC1(13))
0145  3 FORMAT(3I6)
0146  PRINT(NPRT,2)
0147  PRINT(NPRT,4) ((IREC3(I,J),I=1,2),J=1,IREC1(14))
0148  4 FORMAT(1H ,A1,I4)
0149  PRINT(NPRT,5)
0150  5 FORMAT(1H1)
0151  IF(IREC1(9),NE,1) G0 T0 9
0152  PRINT(NPRT,6) ((IREC4(I),I=1,IREC1(16))
0153  6 FORMAT(20I6)
0154  PRINT(NPRT,5)
0155  PRINT(NPRT,6) ((IREC5(I),I=1,IREC1(17))
0156  PRINT(NPRT,5)
0157  6 PRINT(NPRT,3) ((IREC6(I,J),I=1,3),J=1,IREC1(10))
0158  7 CONTINUE

```

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F0PTRAN IV-PIUS V02-51  
ADMANTL.FTH /TR:RL0CKS/WP

06114122

24\*APR\*78

PAGE 5

C  
C  
0159  
0160

.....  
RETURN  
END

## PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	005656 1495	RW,I,CEN,LCL
3	SINATA	000516 167	RW,C,CEN,LCL
4	SVARS	032024 6666	RW,C,CEN,LCL
5	STEMPS	000032 1	RW,C,CEN,LCL
6	RD	002346 627	RW,C,ZVR,GRL
7	MTX	023420 5000	RW,C,ZVR,GRL
8	CK	010004 2050	RW,C,ZVR,GRL
9	MP1	000016 7	RW,C,ZVR,GRL

## ENTRY PRINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
AAMANL		1-000000												

## VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	9-000014	I	I*2	4-031776	II	I*2	4-032020	IMAX	I*2	4-032004	IND	I*2	8-010002
ING	I*2	8-010000	J	I*2	4-032002	JJ	I*2	4-032022	JMAX	I*2	4-032000	MIND	I*2	9-000000
NAID	I*2	9-000012	NCCT	I*2	4-032012	NPRY	I*2	9-000006	RCHECK	R*4	4-032006	RT	R*4	9-000002
TIND	I*2	9-000010	TV	I*2	4-032016	X	I*2	4-032014						

## ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	I*2	6-000000	000642 209	(11,19)
DT	I*2	6-001504	000642 209	(11,19)
G	I*2	6-000642	000642 209	(11,19)
IREC1	I*2	4-000000	000050 20	(20)
IREC2	I*2	4-000050	001130 300	(3,100)
IREC3	I*2	4-001200	000050 20	(2,10)
IREC4	I*2	4-001250	013560 3000	(3000)
IREC5	I*2	4-015030	013560 3000	(3000)
IREC6	I*2	4-030610	001166 315	(3,105)
JD	I*2	8-004000	004000 1024	(256,4)
JG	I*2	8-000000	004000 1024	(256,4)
RA	R*4	7-000000	023420 5000	(50,50)

## LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
1'	3-000410	2'	3-000424	3'	3-000438	4'	3-000434
6'	3-000450	7	1-005454	8	1-004544	9	1-005536
223'	3-000140	224	1-000426	225'	3-000034	230'	3-000112
						5'	3-000444
						222'	3-000220
						775'	3-000000

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FZTRAN IV-PLUS V02-31  
ADMNLF.TN /TPRL8CK\$WR

08114122 24\*APR\*78

PAGE 7

776'	3-000015	780	1-000436	781	1-000542	820	**	880'	3-000276
881	1-001554	882'	3-000322	883'	3-000336	884'	3-000155	885	1-001532
886	1-002430	887	1-002316	920	1-003146	921'	3-000766	980	1-003462
960	1-003754								

FUNCTIONS AND SUBROUTINES REFERENCED

IERR IFCN INDOT INDGT JFCN PR2BPT ZBT

TOTAL SPACE ALLOCATED = 078432 14013



```

C SUBROUTINE PR2RPT
C
0001 C SUBROUTINE PR2RPT(IREC4,NCCT)
C
C
0002 C IMPLICIT INTEGER (A=0),(S=Z)
C COMMON /MPI/MIND ,RT,NPRT,TIND,VAID
C
0003 C COMMON /MPI/MIND ,RT,NPRT,TIND,VAID,DTN
C
C
0004 C COMMON /CK7/JR(256,4),JR(256, 4),ING,IND
0005 C COMMON /MTX/RA( 50,50)
C
0006 C DIMENSION IREC4(3000)
C
C
0007 PFLG=0
0008 IF(PFLG.NE.1) GO TO 261
0009 WRITE (NPRT,260) ((JD(I,J), J=1,4),I=1,256)
0010 260 FORMAT(1H, 10X,4(10))
0011 WRITE (NPRT,260) ((JG(I,J),J=1,4),I=1,256)
0012 261 CONTINUE
0013 IF(IND.LE.0) STOP
0014 CALL INDDM
0015 IF(PFLG.NE.1) GO TO 262
0016 WRITE (NPRT,260) ((JD(I,J), J=1,4),I=1,256)
0017 WRITE (NPRT,260) ((JG(I,J),J=1,4),I=1,256)
0018 262 CONTINUE
0019 CALL MSUM
0020 CALL SORT
0021 MIND=1
0022 IF(TIND.EQ.1) WRITE(NPRT,750)
0023 IF(TIND.EQ.2) WRITE(NPRT,850)
0024 IF(TIND.EQ.3) WRITE(NPRT,950)
0025 750 FORMAT(1H1,10X,'THE MATRIX A(G,C)')
0026 850 FORMAT(1H1,10X,'THE MATRIX A(A,D)')
0027 950 FORMAT(1H1,10X,'THE MATRIX A(G,A)')
C
C
0028 C TIND=1 IMPLIES RA(I,J) IS NUMBER COUNT
C FOR CLASS AND CLUSTER FILES, LOAD OUTPUT ARRAY
C IF(DTN.LT.3.AND.TIND.EQ.1) CALL DISKLD(IREC4,NCCT,DTN)
C
C

```

```

0029      CALL MTXPT
0030      CALL PRPB
0031      MIND=2
0032      IF(TIND,EO,1) WRITE(NPRT,755)
0033      IF(TIND,EO,2) WRITE(NPRT,855)
0034      IF(TIND,EO,3) WRITE(NPRT,955)
0035      755 FORMAT(1H1,10X,'THE MATRIX P(G,D)')
0036      855 FORMAT(1H1,10X,'THE MATRIX P(AI,D)')
0037      955 FORMAT(1H1,10X,'THE MATRIX P(G,AI)')
0038      CALL MTXPT
0039      MIND = 3
0040      IF(TIND,EO,1) WRITE(NPRT,756)
0041      IF(TIND,EO,2) WRITE(NPRT,856)
0042      IF(TIND,EO,3) WRITE(NPRT,956)
0043      756 FORMAT (1H1,10X, 'THE MATRIX P(D/G)')
0044      856 FORMAT (1H1,10X, 'THE MATRIX P(D/AI)')
0045      956 FORMAT(1H1,10X,'THE MATRIX P(AI/G)')
0046      CALL MTXPT
0047      CALL PRPBC
0048      MIND = 4
0049      IF(TIND,EO,1) WRITE(NPRT,757)
0050      IF(TIND,EO,2) WRITE(NPRT,857)
0051      IF(TIND,EO,3) WRITE(NPRT,957)
0052      757 FORMAT (1H1,10X, 'THE MATRIX P(G/D)')
0053      857 FORMAT (1H1,10X, 'THE MATRIX P(AI/D)')
0054      957 FORMAT(1H1,10X,'THE MATRIX P(G/AI)')
0055      CALL MTXPT
0056      RETURN
0057      END

```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCNDF1	001444 402	Rw,I,C0N,LCL
3	SINATA	000514 166	Rw,C,C0N,LCL
4	SVARS	000006 3	Rw,C,C0N,LCL
6	MP1	000016 7	Rw,C,ZVR,GRL
7	CK	010004 2050	Rw,C,ZVR,GRL
8	MTY	023420 5000	Rw,C,ZVR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
PR0PRT		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	6-000014	I	I*2	4-000002	IND	I*2	7-010002	ING	I*2	7-010000	J	I*2	4-000004
MIND	I*2	6-000000	NAID	I*2	6-000012	NCCY	I*2	6-000004	NPRT	I*2	6-000006	PFLG	I*2	4-000000
RT	R*4	6-000002	TIND	I*2	6-000010									

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
IREC4	I*2	6-000002	013560 3000	(3000)
JD	I*2	7-004000	004000 1024	(256,4)
JG	I*2	7-000000	004000 1024	(256,4)
RA	R*4	8-000000	023420 5000	(50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
260	3-000000	261	1-000264	262	1-000540	750	3-000010	755	3-000124
756	3-000240	757	3-000354	850	3-000040	855	3-000154	856	3-000270
857	3-000404	950	3-000072	955	3-000206	956	3-000322	957	3-000436

FUNCTIONS AND SUBROUTINES REFERENCED

DISKLD INDDM MSUM MTXPT PR0P PR0BC SORT

TOTAL SPACE ALLOCATED = 035630 7628

B-35

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FORTRAN IV-PLUS V02-51  
ADMIN'L,FTN /TP:RL2CKS/WR

06115128 24-APR-78

PAGE 11

```
0001      SUBROUTINE INDDM
0002      IMPLICIT INTEGER(A-Z)
0003      COMMON /CK/JG(256,4),JD(256, 4),ING,IND
0004      DP 10 I=1,ING
0005      DP 20 J2=1,256
0006      20 IF(JG(I2,3).EQ.1) GO TO 30
0007      30 CONTINUE
0008      JG(I,4) = JG(I2,2)
0009      10 CONTINUE
0010      DP 10 J=1,IND
0011      DP 20 J2=1,256
0012      20 IF (JD(J2,3).EQ.1) GO TO 31
0013      31 CONTINUE
0014      JD(J,4) =JD(J2,2)
0015      11 CONTINUE
0016      RETURN
0017      END
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000314 102	RW,I,C0N,LCL
4	SVARS	000010 4	RW,C,C0N,LCL
5	STEMPS	000004 2	RW,C,C0N,LCL
6	CK	010004 2050	RW,C,PVR,GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
INDDM		1*000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
I	I*2	4*000000	IND	I*2	6*010002	ING	I*2	6*010000	I2	I*2	4*000002	J	I*2	4*000004
J2	I*2	4*000006												

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6*004000	004000 1024	(256,4)
JG	I*2	6*000000	004000 1024	(256,4)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	**	11	**	20	**	21	**	30	1*000112
31	1*000246								

TOTAL SPACE ALLOCATED \* 010334 2158

N2 FPP INSTRUCTIONS GENERATED

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```

0001 SUBROUTINE MTXPT
0002 IMPLICIT INTEGER (A=0), (S=Z)
      COMMON /MPI/MIND ,PT,NPRT,TIND,NAID
      *
0003 COMMON /MPI/MIND ,PT,NPRT,TIND,NAID,BTN
      *
0004 COMMON /CK/JG(256,4),JD(256, 4),ING,IND
0005 COMMON /MTX/RAT 50,50)
0006 I10=0
0007 MLIM=(IND/10)*10+1
0008 DO 666 LLIM=1,MLIM,10
0009 ULIM=LLIM+9
0010 IF(IND.GE.LLIM.AND.IND.LT.ULIM) LLIM=IND
0011 WRITE(NPRT,751) (JD(JJ,4),JJ=LLIM,ULIM)
0012 751 FORMAT(1H0,10X,10(1X,15,2X))
0013 DO 652 II=1,ING
0014 IF (MIND.GT.2) GO TO 200
0015 IF (MLIM=1.EQ.IND.AND.ULIM.EQ.IND) I10=1
0016 IF (ULIM.EQ.IND) ULIM=ULIM+1
0017 200 CONTINUE
0018 IF(I10.EQ.1) GO TO 400
0019 IF(MIND.EQ.1) WRITE (NPRT,653) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0020 IF(MIND.EQ.2) WRITE (NPRT,253) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0021 IF(MIND.EQ.4) WRITE (NPRT,253) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0022 IF (MIND.EQ.3) WRITE(NPRT,253) JG(II,4), (RA(II,JJ)/RA(II,IND+1),
      * JJ=LLIM,ULIM)
0023 IF(MIND.EQ.1.AND.II.EQ.ING) WRITE(NPRT,356) (RA(ING+1,JJ),JJ=
      * LLIM,ULIM)
0024 IF(MIND.EQ.2.AND.II.EQ.ING) WRITE(NPRT,256) (RA(ING+1,JJ),JJ=
      * LLIM,ULIM)
0025 356 FORMAT(1H0,10X,10F10,0)
0026 256 FORMAT(1H0,10X,10F10,5)
0027 653 FORMAT(1H0, 5X,15,10F10,0)
0028 253 FORMAT(1H0, 5X,15,10F10,5)
0029 GO TO 652
0030 400 CONTINUE
0031 IF(MIND.EQ.1) WRITE (NPRT,643) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0032 IF(MIND.EQ.2) WRITE (NPRT,243) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0033 IF(MIND.EQ.1.AND.II.EQ.ING) WRITE(NPRT,346) (RA(ING+1,JJ),JJ=
      * LLIM,ULIM)
0034 IF(MIND.EQ.2.AND.II.EQ.ING) WRITE(NPRT,246) (RA(ING+1,JJ),JJ=
      * LLIM,ULIM)
0035 346 FORMAT(1H0,10X,11F10,0)
0036 246 FORMAT(1H0,10X,11F10,5)
0037 643 FORMAT(1H0, 5X,15,11F10,0)
0038 243 FORMAT(1H0, 5X,15,11F10,5)
0039 652 CONTINUE
0040 WRITE (NPRT,100)
0041 100 FORMAT (1H0)
0042 IF(I10.EQ.1) GO TO 500
0043 IF(MLIM=1.EQ.IND.AND.IND.EQ.ULIM) GO TO 500
0044 666 CONTINUE

```



F2RTRAN IV-PIUS V02-51  
ADMANL,FTN /TRIPLOCKYS/KR

16115172

24-APR-79

PAGE 14

0045 500 CONTINUE  
0046 RETURN  
0047 END

B-39

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FORTRAN IV-PLUS V02-51  
ADHNL.FTH /TRIP/2CKS/WP

16115172 26-APR-78

PAGE 15

# PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCNDR1	002220	584
3	TIMEA	001154	44
4	SVARS	000014	6
5	STEMS	000004	2
6	HP1	000016	7
7	CK	010004	2050
8	HTY	023420	9000

## ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
RTXPT		1-000000												

## VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DYN	1*2	6-000014	II	1*2	4-000014	IND	1*2	7-010002	ING	1*2	7-010000	110	1*2	4-000000
JJ	1*2	4-000010	LLI	1*2	4-000004	MIND	1*2	4-000000	MLI	1*2	4-000002	NAI	1*2	6-000012
NPRT	1*2	6-000006	RT	0*4	6-000002	TIND	1*2	6-000010	ULI	1*2	4-000006			

## ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	1*2	7-004000	004000	1024 (256,4)
JG	1*2	7-000000	004000	1024 (256,4)
PA	0*4	8-000000	023420	9000 (50,50)

## LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
100'	3-000150	200	1-000314	243'	3-000134	246'	3-000104	253'	3-000060
256'	3-000032	346'	3-000074	356'	3-000020	400	1-001342	500	1-002214
643'	3-000120	652	1-002172	653'	3-000044	666	**	751'	3-000000

TOTAL SPACE ALLLOCATED = 036056 7703

```

0001      SUBROUTINE SORT
0002      IMPLICIT INTEGER (A=0),(S=2)
0003      COMMON /CK/JG(256,4),JD(256, 4),ING,IND
0004      COMMON /MTY/RA( 50,50)
0005      INGM=ING+1
0006      DO 10 I=1,ING
0007      DO 10 II=1,INGM
0008      IF (JG(II,4).LE.JG(II+1,4)) GZ T= 10
0009      JJ = JG(II,4)
0010      JG(II,4) = JG(II+1,4)
0011      JG(II+1,4) = JJ
0012      INDP=IND+1
0013      DO 20 J=1,INDP1
0014      RR = RA (II,J)
0015      RA(II,J) = RA(II+1,J)
0016      RA(II+1,J)=RR
0017      20  CONTINUE
0018      10  CONTINUE
0019      INDM=IND+1
0020      DO 30 J=1,IND
0021      DO 30 JJ=1,INDM
0022      IF (JD(JJ,4).LE.JD(JJ+1,4))GZ T= 30
0023      II=JD(JJ,4)
0024      JD(JJ,4)=JD(JJ+1,4)
0025      JD(JJ+1,4)=II
0026      INGP=ING+1
0027      DO 40 I=1,INGP1
0028      RR=RA(I,JJ)
0029      RA(I,JJ)=RA(I,JJ+1)
0030      RA(I,JJ+1) =RR
0031      40  CONTINUE
0032      30  CONTINUE
0033      RETURN
0034      END

```

B-41

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PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCDPF1	000564 186	R, I, CON, LCL
4	SVARS	000024 10	R, D, CON, LCL
5	ITEMPS	000010 4	R, D, CON, LCL
6	CK	010004 2050	R, D, ZVR, GRL
7	MTX	023420 5000	R, D, ZVR, GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
SORT		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
I	I*2	4-000000	II	I*2	4-000004	IND	I*2	6-010002	INDM1	I*2	4-000020	INDP1	I*2	4-000010
ING	I*2	6-010000	INGHI	I*2	4-000000	INGP1	I*2	4-000022	J	I*2	4-000012	JJ	I*2	4-000006
RR	R*4	4-000014												

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000 1024	(256,4)
JG	I*2	6-000000	004000 1024	(256,4)
RA	R*4	7-000000	023420 5000	(50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	1-000244	20	**	30	1-000524	40	**		

TOTAL SPACE ALLOCATED = 034244 7250

```
0001      SUBROUTINE MSUM
0002      IMPLICIT INTEGER (A=0),(S=Z)
0003      COMMON /CK/JG(256,4),JD(256, 4),ING,IND
0004      COMMON /MTX/RA( 50,50)
0005      D0 651 JJ=1,IND
0006      D0 651 II=1,ING
0007      RA(ING+1,JJ)=RA(ING+1,JJ)+RA(II,JJ)
0008  A51  CONTINUE
0009      INGP1=ING+1
0010      D0 650 II=1,INGP1
0011      D0 650 JJ=1,IND
0012      RA(II,IND+1)=RA(II,IND+1)+RA(II,JJ)
0013  650  CONTINUE
0014      RETURN
0015      END
```

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PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000274 94	RW,I,C0N,LCL
4	SVARS	000006 3	RW,D,C0N,LCL
6	CK	010004 2050	RW,D,2VR,GRL
7	MTX	023420 5000	RW,D,2VR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
MSUM		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
II	I*2	4-000000	IND	I*2	6-010002	ING	I*2	6-010000	INGP1	I*2	4-000004	JJ	I*2	4-000000

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000	1024 (256,4)
JS	I*2	6-000000	004000	1024 (256,4)
RA	R*4	7-000000	023420	5000 (50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
650	**	651	**				

TOTAL SPACE ALLOCATED = 033726 7147



```

0001      SUBROUTINE PR0R
0002      IMPLICIT INTEGER (A-D),(F-Z)
0003      COMMON /MPI/MIND ,RT,NPRT,TINC,NAID
0004      COMMON /CK/JG(256,4),JD(256, 4),ING,IND
0005      COMMON /MTX/RA( 50,50)
0006      INGP1=ING+1
0007      INDP1=IND+1
0008      DO 600 I=1,INGP1
0009      DO 600 J=1,INDP1
0010      RA(I,J) =RA(I,J)/RT
0011      600 CONTINUE
0012      RETURN
0013      END

```

B-15

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000154 54	RK,I,CON,LCL
4	SVARE	000016 4	RK,D,CON,LCL
6	MP1	000016 7	RK,D,ZVR,GBL
7	CK	010004 2050	RK,D,ZVR,GBL
8	MTX	023420 5000	RK,D,ZVR,GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
PR00		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	6-000014	I	I*2	4-000004	IND	I*2	7-010002	INDP1	I*2	4-000002	ING	I*2	7-010000
INGP1	I*2	4-000000	J	I*2	4-000000	MIND	I*2	6-000000	NAIN	I*2	6-000012	NPR1	I*2	6-000006
RT	R*4	6-000002	TIND	I*2	6-000010									

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	7-004000	004000 1024	(256,4)
JG	I*2	7-000000	004000 1024	(256,4)
RA	R*4	8-000000	023420 5000	(50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
600	**								

TOTAL SPACE ALLOCATED = 033626 7115

B-46

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OF POOR QUALITY

```
0001      SUBROUTINE PROBO  
0002      IMPLICIT INTEGER (A-Q),(S-Z)  
0003      COMMON /CK/JR(256,4),JD(256, 4),ING,IND  
0004      COMMON /MTX/RA( 50,50)  
0005      DO 10 J=1,IND  
0006      DO 10 I=1,ING  
0007      RA(I,J) = RA(I,J)/RA(ING+1,J)  
0008 10      CONTINUE  
0009      RETURN  
0010      END
```



PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCNDF1	000146 51	RH,I,C0N,LCL
4	TVARR	000004 2	RH,C,C0N,LCL
6	CK	010004 2050	RH,C,ZVR,GRL
7	MTY	023420 5000	RH,C,ZVR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
PR0BC		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
I	I*2	4-000000	IND	I*2	6-010000	ING	I*2	6-010000	J	I*2	4-000000			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000	1024 (256,4)
JG	I*2	6-000000	004000	1024 (256,4)
RA	R*4	7-000000	023420	5000 (50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	**								

TOTAL SPACE ALLCATED = 033576 7103

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```

0001      SUBROUTINE DISKLN(IREFC,N,DIN)
      C      THIS SUBROUTINE TAKES THE DATA IN RA(I,J) AND COMPRESSES
      C      IT BY ELIMINATING ZEROS AND LOADS THE DATA INTO IREC, THE
      C      FORM OF THE OUTPUT FILE IS:
      C      WD 1 = DTERM NUMBER WITH SIGN CHANGED
      C      WD 2 = CLASSIFIER LABEL FOR CLUSTER (DTN=2)
      C      WD 3 = BYTE 1 = HIGH ZORDER NUMBER WITH CRDP CODE
      C      C      BYTE 2 = CRDP CODE
      C      WD 4 = LOW ZORDER NUMBER WITH CRDP CODE
      C      (REPEAT FOR ALL CRDP CODES IN CLUSTER AND THEN GO ON TO
      C      NEXT CLUSTER)
0002      IMPLICIT INTEGER (A=0),(S=2)
0003      DIMENSION IREC(3000)
0004      COMMON /MTX/RA(50,50)
0005      COMMON /CKZJN/256,4),JN(256,4),ING,IND
0006      N=0
0007      DO 20 I=1,IND
      C      IND = NUMBER OF DTERM CODES
0008      IF(N.GE.3000) RETURN
0009      N=N+1
0010      IREC(N)=JN(I,4)
0011      IF(DTN.EQ.1) GO TO 10
      C      LEAVE SPACE FOR CLASSIFIER LABEL IN CLUSTER RUN
0012      IF(N.GE.3000) RETURN
0013      N=N+1
0014      IREC(N)=0
0015      15 CONTINUE
0016      DO 20 J=1,ING
      C      ING = NUMBER OF GROUND TRUTH CODES
0017      IF(RA(J,I).EQ.0) GO TO 20
0018      IHI=RA(J,I)/32768.0
0019      ILI=RA(J,I)*32768.0
0020      IF(N.GE.3000) RETURN
0021      N=N+1
0022      IREC(N)=IHI*1000+JN(J,4)
0023      IF(N.GE.3000) RETURN
0024      N=N+1
0025      IREC(N)=ILI
0026      20 CONTINUE
0027      RETURN
0028      END

```

B-19

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCDDF1	000524 170	Rh,I,C0A,LCL
2	SPDATA	000004 2	Rh,D,C0N,LCL
3	SIDATA	000012 5	Rh,D,C0N,LCL
4	SVARS	000010 4	Rh,D,C0A,LCL
5	STEMPS	000006 3	Rh,D,C0A,LCL
6	MTX	023420 5000	Rh,D,ZVF,GRL
7	CK	010004 2050	Rh,D,ZVF,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DISKLD		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	F-000006*	I	I*2	4-000000	IHI	I*2	4-000004	IL0	I*2	4-000006	IND	I*2	7-010002
ING	I*2	7-010000	J	I*2	4-000002	N	I*2	F-000004*						

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
IREC	I*2	F-000002*	013560 3000	(3000)
JD	I*2	7-004000	004000 1024	(256,4)
JG	I*2	7-000000	004000 1024	(256,4)
RA	R*4	6-000000	023420 5000	(50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	1-000200	20	1-000400						

TOTAL SPACE ALLLOCATED = 034204 7274

B-50

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F0RTRAN IV-PLUS V02-51  
ADMANL.FTN /TR:R1RCKS/WR

0611A110 24-APR-78

PAGE 26

C  
C \*  
C .....\*

ADMANL.0BJ.LP:=[170,1]ADMANL.FTN

```

0001      SURFUTIME DRUM(L)
0002      IMPLICIT INTEGER (A-Z)
0003      DIMENSION MT(6)
0004      COMMON /DD/DCTR(3,36)
0005      COMMON /FD/A(11,19),G(11,19),DT(11,19)
0006      COMMON /MPI/MIND ,PT,NPRT,TINC,NAID
0007
0008      *
0009
0010      COMMON /MPI/MIND ,PT,NPRT,TINC,NAID,DTN
0011      NS=0
0012      DO 100 S=1,19
0013      OS=OS+2
0014      M=0
0015      DO 200 LL=1,3
0016      DO 200 SS=1,2
0017      M=M+1
0018      SSS=OS+SS-2
0019      IF (SSS,GT,36) WRITE(NPRT,300) SSS
0020      IF (SSS,GT,36) STOP
0021      300 FORMAT(1H0,10X,'SSS=',15)
0022      MT(M)=DCTR(LL,SSS)
0023      200 CONTINUE
0024      CALL CRDPL(CRDP,MT,NC)
0025      G(L/10,S)=CRDP
0026      100 CONTINUE
0027      RETURN
0028      END

```

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PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	%CDP1	000354	118
3	%IDATA	000076	11
4	%VARE	000034	14
6	DD	000344	114
7	RD	002346	627
8	MPI	000014	6

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DDUM		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
CRZP	1*2	4-000030	DTN	1*2	4-000012	L	1*2	4-000002	LL	1*2	4-000022	M	1*2	4-000020
MIND	1*2	8-000000	NAID	1*2	4-000010	NC	1*2	4-000032	NPRY	1*2	8-000004	OS	1*2	4-000014
RT	1*2	8-000002	S	1*2	4-000016	SS	1*2	4-000024	SSS	1*2	4-000026	TIND	1*2	8-000006

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	1*2	7-000000	000642	209 (11,19)
DCTR	1*2	6-000000	000344	114 (3,38)
DT	1*2	7-001504	000642	209 (11,19)
G	1*2	7-000642	000642	209 (11,19)
MT	1*2	4-000000	000014	6 (6)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
100	**	200	**	300	3-000000		

FUNCTIONS AND SUBROUTINES REFERENCED

CRZPL

TOTAL SPACE ALLOCATED = 003364 890

NO FORTRAN INSTRUCTIONS GENERATED

DDUMD.OBJ,LP1=C170,1DDUMD.FTH



PDSTR,FTN /TRIRLCKS/WR

```

0001      SUBROUTINE PDSTR
0002      IMPLICIT INTEGER (A-Z)
0003      COMMON /DD/DTTR(3,38)
0004      NPRT=6
0005      J1=1
0006      DO 200 JJ=1,2
0007      J2=J1+20=1
0008      IF(J2.EQ.40) J2=38
0009      DO 100 I=1,3
0010      WRITE(NPRT,101) (DTTR(I,J),J=1,J2)
0011      101 FORMAT(1H ,10X,20(214,2X))
0012      100 CONTINUE
0013      WRITE(NPRT,102)
0014      102 FORMAT(1H0)
0015      J1=J2+1
0016      200 CONTINUE
0017      WRITE(NPRT,102)
0018      RETURN
0019      END
    
```

B-54

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FORTRAN IV-PLUS V02-51  
PDSTR.FTH /TP:RI2CKS/49

08116120 24-APR-78

PAGE 2

# PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCDEF1	000304 98	Rw,I,C0N,LCL
3	FINATA	000023 9	Rw,C,C0N,LCL
4	SVARS	000014 6	Rw,C,C0N,LCL
6	DD	000344 114	Rw,C,EVR,GRL

## ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
PDSTR		1-000000												

## VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
I	1*2	4-000010	J	1*2	4-000012	JJ	1*2	4-000004	JT	1*2	4-000002	J2	1*2	4-000006
NPRT	1*2	4-000000												

## ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
DDTR	1*2	5-000000	000344 114	(3,38)

## LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
100	**	101	3-000010	102	3-000016	200	**

TOTAL SPACE ALLOCATED = 000706 227

N2 FPP INSTRUCTIONS GENERATED

PDSTR,2BJ,LP1=[170,1]PDSTR.FTH

B-55

```

0001      SUPROUTINE FILNAM (INNAME,OUTNAM)
0002      IMPLICIT INTEGER (A-Z)
0003      PARAMETER SIZE=64,MAXDSK=3
0004      DIMENSION INNAME(7),OUTNAM(13),SITE(SIZE,MAXDSK)
0005      DIMENSION HSEGNH(5)
0006      BYTE D(9),T(9)
0007      NPRT=6

C
C      *** SUBROUTINE VALIDATES SEGMENT NUMBER AND
C      * MOVES FILE NAME FROM INNAME TO OUTNAM ***
C      *ALL FILE NAMES ARE CHECKED FOR SAME SEGMENT NO. *
C
0008      IF(COUNT.NE.0)G2 T2 50

C
C      *** READ IN SITE ID TABLE ***
C
0009      OPEN (UNIT=3,NAME='C110,80HEDREC,SIT11',TYPE='D',
C      *      FORM='UNFORMATTED',ACCESS='SEQUENTIAL',READONLY)
0010      READ (3) ((SITE(J,K), J=1,SIZE),K=1,MAXDSK)
0011      CALL CLOSE (3)
0012      50      CONTINUE
0013      COUNT=COUNT+1

C      *** PICK UP AT DATA BASE NUMBER FROM TABLE ***
0014      DECODE (4,706,INNAME(1)) SEGNUM
0015      706      FORMAT(14)
0016      D2 60 K=1,MAXDSK
0017      D2 65 J=1,SIZE
0018      IF(SITE(J,K).EQ.SEGNUM)G2 T2 69
0019      65      CONTINUE
0020      60      CONTINUE
0021      WRITE (NPRT,707) SEGNUM
0022      707      FORMAT (//,10X,'INVALID GROUPED TRUTH SEGMENT NO. = ',I4)
0023      G2 T2 88
0024      69      CONTINUE
0025      DBNUM=K
0026      IF(DBNUM.NE.1)G2 T2 72
0027      OUTNAM(5)='1'
0028      G2 T2 76
0029      72      CONTINUE
0030      IF(DBNUM.NE.2)G2 T2 74
0031      OUTNAM(5)='2'
0032      G2 T2 76
0033      74      CONTINUE
0034      OUTNAM(5)='3'
0035      76      CONTINUE

0036      HSEGNH(COUNT)=SEGNUM      !STORE SEG NO.
0037      D2 80 I=1,COUNT
0038      IF(HSEGNH(I).NE.SEGNUM)G2 T2 85
0039      80      CONTINUE
0040      G2 T2 89
0041      85      CONTINUE
C      *** INVALID SEG NO, ERROR DOES NOT MATCH OTHERS *
0042      WRITE (NPRT,708)HSEGNH(1),COUNT,SEGNUM
0043      708      FORMAT (1H0,'SEGMENT NUMBERS DO NOT MATCH',5X,
C      *      'SEG GT = ',I4,' SEG ',I4,' = ',I4)

```

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FORTRAN IV-PLUS V02-31  
FILNAM,FTN /TRIRLCKNS/HR

08116127 24-APR-78

PAGE 2

0044 88 CONTINUE  
0045 CALL DATE(D)  
0046 CALL TIME(T)  
0047 WRITE (NPRT,710)D,T  
0048 WRITE (NPRT,710)D,T  
0049 STOP  
0050 710 FORMAT(1H0,10X,'JSP ERRORRED OFF \* ON ',9A1,' AT ',8A1)  
0051 89 CONTINUE  
0052 CALL SUBSTR (INN1ME,1,13,2UTNAM,12,13)  
0053 RETURN  
0054 END

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	001136	303
2	EPDATA	000044	18
3	SINATA	000366	123
4	SVARS	000652	213

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
FILNAM		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
COUNT	I*2	4-000636	DRNUM	I*2	4-000646	I	I*2	4-000650	J	I*2	4-000660	K	I*2	4-000662
NPRT	I*2	4-000634	SFNUM	I*2	4-000644									

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
D	L*1	4-000612	000011	4 (9)
HSEGM	I*2	4-000600	000012	5 (5)
INNAME	I*2	F-000002*	000016	7 (7)
OUTNAM	I*2	F-000004*	000032	13 (13)
SITE	I*2	4-000000	000600	192 (64,3)
T	L*1	4-000623	000010	4 (8)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
50	1-000236	60	**	65	**	69	1-000454	72	1-000514
74	1-000546	76	1-000566	80	**	85	1-000667	88	1-000736
89	1-001076	706	3-000000	707	3-000004	708	3-000660	710	3-000162

FUNCTIONS AND SUBROUTINES REFERENCED

CLOSE	DATE	OPENS	SUBSTR	TIME

TOTAL SPACE ALLOCATED = 002442 657

N2 FPP INSTRUCTIONS GENERATED

FILNAM,0BJ,LPI:[170,1]FILNAM,FTN

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```

0001      SUBROUTINE SUBSTR(A,I,N,B,J,M)
0002      IMPLICIT INTEGER (A-Z)
0003      LOGICAL*4 A(1),B(1)
0004      DATA BLANK/24 /
0005      IS=1
0006      JS=J
0007      L=0
0008      IF(N.EQ. 0) GO TO 20
0009      L=N
0010      IF( L.GT. M ) L=M
0011      DO 10 K=1,L
0012      B(JS)=A(IS)
0013      IS=IS + 1
0014      JS=JS + 1
0015      10  CONTINUE
0016      IF( N.GE. M ) RETURN
0017      20  L=L + 1
0018      DO 30 K=L,M
0019      B(JS)=BLANK
0020      JS=JS+1
0021      30  CONTINUE
0022      RETURN
0023      END

```



F2RTRAN IV-PIUS V02-51  
SUBSTR,FTV /TR,PL2CKS/WR

08116141 24-APR-74

PAGE 2

# PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000312	171
3	FIDATA	000024	10
4	SVARS	000012	5
5	STEMPS	000002	1

# ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
SUBSTR		1-000000												

# VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
BLANK	I*2	4-000000	I	I*2	F-000004*	IS	I*2	4-000002	J	I*2	F-000012*	JS	I*2	4-000014
K	I*2	4-000010	L	I*2	4-000006	M	I*2	F-000014*	N	I*2	F-000016*			

# ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	L*1	F-000002* 000001	0	(1)
B	L*1	F-000010* 000001	0	(1)

# LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	**	20	1-000222	30	**				

TOTAL SPACE ALLOCATED = 000352 117

NO FPP INSTRUCTIONS GENERATED

SUBSTR,0RJ,LP1=[170,1]SUBSTR,FTV

ORIGINAL PAGE IS  
OF POOR QUALITY

```
0001 SUBROUTINE CR0PL (CR0P,MT,NC)
0002 IMPLICIT INTEGER (A=0),(S=2)
0003 DIMENSION MT(6)
0004 NC=0
0005 DO 10 I=1,6
0006 CC=MT(I)
0007 N=0
0008 DO 20 J=1,6
0009 IF(CC.EQ.MT(J))N=N+1
0010 20 CONTINUE
0011 IF(N.LE.NC) GO TO 10
0012 NC=N
0013 CR0P=CC
0014 IF(NC.GE.3) RETURN
0015 10 CONTINUE
0016 RETURN
0017 END
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000236	79
3	FINATA	000012	5
4	SVAR5	000010	4

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
CR0PL		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
CC	I*2	4-000002	CR0P	I*2	F-000002*	I	I*2	4-000000	J	I*2	4-000006	N	I*2	4-000004
NC	I*2	F-000006*												

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
MT	I*2	F-000004*	000014	6 (6)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	1-000212	20	**						

TOTAL SPACE ALL0CATED = 000260 28

NO FPP INSTRUCTIONS GENERATED

CR0PL,2BJ,LP1=[170,1]CR0PL,FTN

1  
B-2

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